

UNIVERSITY OF ZAGREB
FACULTY OF VETERINARY MEDICINE

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Division: Department of Animal Production and Biotechnology

Organizational unit: Unit of Animal Nutrition and Dietetics

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Register No of the organizational unit: 61-07-24-9

Zagreb, 23/01/2024



177723	REPUBLIKA HRVATSKA	
Veterinarski fakultet u Zagrebu		
Primljeno:	24.01.2024	
Klasifikacijska oznaka	Org. jed.	
605-03/23-04/28	251-61-32;251-61-41;	
Uredžbeni broj	Prilozi	Vrijednost
251-61-07/353-24-74	0	-

COURSE SYLLABUS

APPLIED ANIMAL NUTRITION

Academic year 2023/2024

Course leader: Assoc. Prof. Hrvoje Valpotić

Deputy course leader: Assist. Prof. Diana Brozić

Teachers: Full Prof. Željko Mikulec, Full Prof. Tomislav Mašek, Assoc. Prof. Hrvoje Valpotić, Assist. Prof. Diana Brozić, teaching assistant Ana Marija Kovač, DVM

First day of classes: 26/02/2024

Last day of classes: 17/05/2024

Activities - Applied animal nutrition (1/3)

	Start T	End Ti	Subject	Group	Note	Length	Instructor	Room
26/02/2024	8:15	9:45	p01 Nutrition in different stages of development	4E-1, 4E-2, 4E-3		1:30	Valpotic H.	P_kemija
29/02/2024	11:45	13:15	p02 Feeding dairy cows	4E-1, 4E-2, 4E-3		1:30	Valpotic H.	P_farmakologija, V_zoohigijena
01/03/2024	8:15	9:45	p03 Calf nutrition. Feeding beef cattle	4E-1, 4E-2, 4E-3		1:30	Mikulec Ž.	P_fiziologija
04/03/2024	8:15	9:45	p04 Sheep nutrition	4E-1, 4E-2, 4E-3		1:30	Mikulec Ž.	P_fizika
04/03/2024	13:30	15:00	v01 Dairy cows	4E-1, 4E-2, 4E-3		1:30	Nastavnici na predmetu	P_patologija
05/03/2024	10:00	10:45	p05 Goat nutrition	4E-1, 4E-2, 4E-3		0:45	Mikulec Ž.	P_fiziologija
05/03/2024	13:30	15:00	v02 Dairy cows, beef cattle	4E-1, 4E-2, 4E-3		1:30	Nastavnici na predmetu	P_patologija
06/03/2024	10:00	11:30	p06 Feeding sows and boars	4E-1, 4E-2, 4E-3		1:30	Valpotic H.	P_fizika
06/03/2024	13:45	15:15	v03 Feeding dairy cows	4E-1, 4E-2, 4E-3		1:30	Nastavnici na predmetu	P_farmakologija
07/03/2024	8:15	9:45	p07 Feeding piglets. Feeding growing-finishing pigs.	4E-1, 4E-2, 4E-3		1:30	Valpotic H.	P_fiziologija
08/03/2024	7:30	9:00	v04 Sheep and goat	4E-1, 4E-2, 4E-3		1:30	Nastavnici na predmetu	P_fizika
11/03/2024	13:45	15:15	p08 Feeding poultry	4E-1, 4E-2, 4E-3		1:30	Mikulec Ž.	P_patologija
12/03/2024	9:15	10:00	p09 Feeding poultry	4E-1, 4E-2, 4E-3		0:45	Mikulec Ž.	P_fiziologija
13/03/2024	8:15	9:45	p10 Dog and cat nutrition	4E-1, 4E-2, 4E-3		1:30	Mikulec Ž.	P_fizika
15/03/2024	10:00	11:30	v05 Swine I	4E-1, 4E-2, 4E-3		1:30	Nastavnici na predmetu	P_patologija

Activities - Applied animal nutrition (2/3)								
	Start T	End Ti	Subject	Group	Note	Length	Instructor	Room
19/03/2024	8:15	9:45	v06 Swine II	4E-1, 4E-2, 4E-3		1:30	Nastavnici na predmetu	P_patologija
20/03/2024	12:00	13:30	v07 Poultry	4E-1, 4E-2, 4E-3		1:30	Nastavnici na predmetu	P_patologija
21/03/2024	11:00	12:30	v08 Dog and cat I	4E-1, 4E-2, 4E-3		1:30	Nastavnici na predmetu	P_patologija
22/03/2024	10:30	16:30	t01	4E-1, 4E-2, 4E-3		6:00	Nastavnici na predmetu	
25/03/2024	10:45	12:15	v09 Dog and cat II	4E-1, 4E-2, 4E-3		1:30	Nastavnici na predmetu	P_farmakologija
27/03/2024	8:15	9:45	v10 Dog and cat III	4E-1, 4E-2, 4E-3		1:30	Nastavnici na predmetu	P_fizika
03/04/2024	10:00	10:45	p11 Dog and cat nutrition	4E-1, 4E-2, 4E-3		0:45	Brozic D.	P_patologija
03/04/2024	10:45	11:30	p12 Feeding horses	4E-1, 4E-2, 4E-3		0:45	Brozic D.	P_patologija
04/04/2024	10:00	11:30	p13 Feeding horses	4E-1, 4E-2, 4E-3		1:30	Brozic D.	P_farmakologija
05/04/2024	10:00	11:30	p14 Feeding rabbits	4E-1, 4E-2, 4E-3		1:30	Brozic D.	P_fizika
10/04/2024	10:00	16:00	t02	4E-1, 4E-2, 4E-3		6:00	Nastavnici na predmetu	
11/04/2024	9:00	9:45	p15 Game nutrition	4E-1, 4E-2, 4E-3		0:45	Mikulec Ž.	P_patologija
11/04/2024	10:00	11:30	v11 Horses	4E-1, 4E-2, 4E-3		1:30	Nastavnici na predmetu	P_patologija
12/04/2024	10:00	11:30	v12 Feeding horses. Rabbit nutrition	4E-1, 4E-2, 4E-3		1:30	Nastavnici na predmetu	P_patologija
16/04/2024	8:30	10:00	v13 Rodent nutrition	4E-1, 4E-2, 4E-3		1:30	Nastavnici na predmetu	P_fizika

Activities - Applied animal nutrition (3/3)

	Start T	End Ti	Subject	Group	Note	Length	Instructor	Room
25/04/2024	10:00	16:00	t03	4E-1, 4E-2, 4E-3		6:00	Nastavnici na predmetu	
17/05/2024	10:00	16:00	t04	4E-1, 4E-2, 4E-3		6:00	Nastavnici na predmetu	
27/06/2024	11:00	12:00	Applied animal nutrition, Ispit		Exam	1:00	Valpotic H.	P_kemija
08/07/2024	11:00	12:00	Applied animal nutrition, Ispit		Exam	1:00	Valpotic H.	P_kemija
			Applied animal nutrition, Ispit		Exam	1:00	Valpotic H.	P_kemija
			Applied animal nutrition, Ispit		Exam	1:00	Valpotic H.	P_kemija
Total: 36						66:15		

STUDENT OBLIGATIONS

Lecture attendance	During the session of the "Applied Animal Nutrition" course, the student must attend 13 lecture lessons to gain a minimum of 3 points. The maximum number of points from this evaluation element is 6 points. Students who don't obtain a minimum of required points for the attendance of lectures are not eligible for the exam.
Practicals attendance	During the session of the "Applied Animal Nutrition" course, the student must attend 34 practical lessons to gain a minimum of 8 points. The maximum number of points from this evaluation element is 12 points. Students who don't obtain a minimum of required points for the attendance of practicals are not eligible for the exam.
Active participation in seminars and practicals	During the session at the time of practicals, the students will be given a short-announced quiz. Minimum number of points to pass this evaluation is 5. Students who don't obtain a minimum of required points for the activity or are not present at the time of the quiz are not eligible for the exam. The maximum number of points that a student can gain on the quiz is 10.
Final exam	The final exam will consist of a written and oral part. The written exam will consist of 20 questions, each of which is worth 1 point. The written exam is in the form of multiple-choice (a to d) with only one correct answer. Students who do not achieve a minimum number of points in the written part of the final exam (less than 12) cannot take the oral exam. Students who achieve a sufficient number of points (12 to 20) are eligible for the oral exam. A maximum of 20 points can be obtained in the oral exam, and the minimum number of points that must be obtained is 12. The final grade consists of the sum of the points of the written and oral exam.
Examination requirements	Student requirements are defined in the Regulations on the Integrated Undergraduate and Graduate Study of Veterinary Medicine (2023). Given the above, the student must acquire a minimum number of points from all assessment elements to take the final exam. Under Article 45, paragraphs 3 and 4 of the Regulations on Integrated Undergraduate and Graduate Studies (2023): a student can justifiably be absent from up to 50 % of the lectures; 30% of the seminars, and 30 % of the practicals.

GRADING AND EVALUATING STUDENT WORK

Continuous knowledge-checking (mid-terms)	During the session one mid-term will be organized, made out of 32 questions or problems. Each correctly solved problem or answered question is worth 1 point. A student must gain a total of a minimum of 20 points from the mid-term. The maximum number of points from this evaluation is 32 points. Students will have 2 terms to complete this evaluation element. Students who don't obtain a minimum of required points or are not present at all mid-terms in admitted time are not eligible for the exam.
Mid-term (dates)	20.5.2024., 4.6.2024.
Final exams (dates)	3.4.2024., 22.5.2024., 27.6.2024., 8.7.2024., 2.9.2024., 19.9.2024.
Form of final exam	Written and oral

LITERATURE

Obligatory literature	1. Cheeke, P. R. (2005): Applied Animal Nutrition. Feeds and Feeding. (3rd ed.). Pearson Prentice Hall, USA.
Optional literature	1. Pond, W. G., D. C. Church, K. R. Pond (1995): Basic Animal Nutrition and Feeding (Fourth Edition). John Wiley and Sons Inc., USA. 2. McDonald, P., R. A. Edwards, J. F. D. Greenhalgh, C. A. Morgan, L. A. Sinclair, R. G. Wilkinson (2010): Animal Nutrition (Seventh edition). Pearson Prentice Hall, USA.

OBJECTIVES AND LEARNING OUTCOMES

Course objectives	Upon completion of the lectures and after passing the final exam of "Applied Animal Nutrition" the students will be able to recognize the conditions in the field and to take feed samples for chemical analysis. They will also know the right procedure for taking samples for analysis and super analysis and to correctly interpret the results. The acquired skills will enable them to individually formulate balanced rations and feedstuffs for all species and categories of animals. They will also be able to recognize specific nutrient deficiencies and malnutrition in domestic and wild animals which could have a negative effect on the health status and their productivity. Students will be capable of determining and applying preventive and therapeutic feeding in cases of metabolic disorders of high-producing animals. Besides field work the students will be capable of working in feed mills and in other biomedical fields which require basic knowledge of veterinary nutrition.
Learning outcomes	Upon successful completion of the course, students will be able to: <ol style="list-style-type: none">1. Know the characteristics of feeding different species of domestic and wild animals in certain physiological periods2. Estimating the daily nutritive needs of animals according to the tables of nutritional requirements, biological experiments, and practical experience3. Recognize deficiencies in feed of domestic and wild animals4. Manually and with computer software formulate rations for certain species and categories of animals5. Recommend proper feeding for different species and categories of animals in practical farm conditions and corrections for inappropriate feeding

GRADING SCHEME

<i>Points</i>	<i>Grade</i>
Up to 59	1 (F)
60-76	2 (D,E)
77-84	3 (C)
85-92	4 (B)
93-100	5 (A)

Course leader:



Head of organizational unit:

